

CLAIMS

What is claimed is:

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1. A data transmission system comprising:
a two-way communication link comprising at least one satellite;
at least one user terminal having two-way communication with the two-way communication link; and
at least one gateway having access to data and having two-way communication with the two-way communication link.
 2. The system recited in Claim 1 wherein the two-way communication link comprises a low bandwidth two-way communication link.
 3. The system recited in Claim 2 wherein the low bandwidth two-way communication link comprises a Ka-band communication link.
 4. The system recited in Claim 1 wherein the two-way communication link comprises a low bandwidth request link and a high bandwidth data broadcast link.
 5. The system recited in Claim 4 wherein the low bandwidth request link comprises a Ka-band communication link.
 6. The system recited in Claim 5 wherein the Ka-band communication link provides a plurality of spot beams that cover selected coverage regions.
 7. The system recited in Claim 4 wherein the high bandwidth broadcast link comprises a Ku-band communication link.
 8. The system recited in Claim 7 wherein the Ku-band communication link broadcasts a wide area coverage beam to allow the requested information to be received by multiple user terminals.
 9. The system recited in Claim 1 wherein the at least one user terminal comprises a cache.
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10. The system recited in Claim 1 wherein the at least one gateway comprises a cache.

11. A method of communication data comprising the steps of:
 providing one or more orbiting satellites that comprise a two-way communication link;
 providing at least one user terminal having two-way communication with the two-way communication link;
 5 providing at least one gateway having access to data and having two-way communication with the two-way communication link;
 generating requests for data at the at least one user terminal;
 transmitting the requests for data from the at least one user terminal by way of
 10 the two-way communication link to the at least one gateway;
 obtaining the requested data at the at least one gateway; and
 transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link.

12. The method recited in Claim 11 wherein the step of transmitting the requests for data comprises transmitting the requests for data by way of a low bandwidth communication link.

13. The method recited in Claim 12 wherein the low bandwidth communication link comprises a low bandwidth satellite communication link.

14. The method recited in Claim 12 wherein the low bandwidth communication link comprises a low bandwidth terrestrial communication link.

15. The method recited in Claim 12 wherein the low bandwidth communication link comprises a low bandwidth wireless communication link.

16. The method recited in Claim 11 wherein the step of transmitting the requested data comprises transmitting the data by way of a low bandwidth communication link.

17. The method recited in Claim 11 wherein the step of transmitting the requested data comprises transmitting the data by way of a high bandwidth data broadcast link.

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23. The method recited in Claim 17 further comprising the step of broadcasting the requested information at predetermined intervals to simulate real-time information broadcasts.

25. A data transmission system comprising:
a terrestrial communication link for communicating requests for data;
a satellite broadcast link for transmitting the requested data;
at least one gateway having access to data that communicates with the terrestrial communication link and the satellite broadcast link; and
at least one user terminal that communicates with the terrestrial communication link and the satellite broadcast link and that comprises a cache for caching the requested data broadcast by the satellite broadcast link.

26. The system recited in Claim 25 wherein the at least one user terminal comprises a cache.

27. The system recited in Claim 25 wherein the at least one gateway comprises a cache.

28. The system recited in Claim 25 further comprising a terrestrial communication link for transmitting the requested data to the at least one user terminal in the event that the satellite broadcast link becomes inoperative.

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